

APPENDIX B

DISCRIMINANT ANALYSIS RUNS SUMMARY

Fourteen separate discriminant analyses were performed examining statistical models for separating case populations into distinct clusters. The runs were conducted to examine the outcomes of alternative approaches in their treatment of: (1) initial group classifications; (2) source of data; and (3) measurement of density. The outcomes of the fourteen analyses are summarized in Appendix B Table. Each column in the table represents a discriminant analysis run. The conditions underlying each run are listed in the column headings. The first four pages of the table (p. 1-4) present outcomes for Runs 1-6 and Run A, which use as initial groupings of case populations Federal and State board findings. The second four pages of the table (p. 5-8) present outcomes for Runs 7-12 and Run B, which use threshold populations to initially group cases.

Several outcomes are presented for each run. The *canonical correlation* and the *squared canonical correlation* measure the extent that the model's independent variables (the discriminants) account for the variation in the dependents (the grouped cases). For instance, in Run A with a canonical correlation of 0.907, 82.3% of the variation is explained by the discriminants. These are measures of the overall performance of the model. Run A was selected as the "best analysis" because it displayed the highest canonical correlation, indicating it was most successful at separating cases into distinct groups.

The discriminant equation (criterion) resulting from each run can be constructed from the Variable 1 coefficient, Variable 2 coefficient, and the constant, as described in the main report. For instance, the equation for Run A is $L = 2.828(LGPCAP3) - .812(LGDEN30) - 4.828$. The Group 1 centroid and Group 2 centroid provide the center score of each group for the discriminant function. The classification rate indicates the extent to which the final classification of cases using the discriminant score matched the classification of cases in the initial groupings.

Final classifications of case populations ("rural" or "non-rural") are listed for each run. A case was classified into the group with the nearest centroid, as measured by the Mahalanobis distances (these are not presented in the summary). Non-rural classifications are indicated by a *U*, while rural classifications are indicated by an *R*. Rural cells are shaded to assist in comparison across runs.

Overall, the fourteen discriminant analyses resulted in similar classifications for most case populations. Variations in initial groupings, data sources, and density measures produced little change in the clustering of the majority of cases. This probably results from an empirical fact that most rural and non-rural cases cluster into distinct groups that are measured by the discriminants and are identifiable using any of the models.

The models produced some differing classifications for populations near urban fringes, for a few mid-sized communities, and for the roaded areas of the Kenai Peninsula. This probably reflects the complexities presented by the mosaic of populations commonly found in rural-urban fringe areas. It also reflects the unique characteristics of a few mid-sized populations that differ from most other Alaska cases clustered by the discriminant analysis. A brief discussion comparing runs follows.

Initial Groups

In discriminant analysis, initial groupings of cases are advanced to focus the analysis on appropriate discriminating variables and separation points. Initial groupings of case populations were identified using two alternative approaches. In one approach, cases were assigned to initial groups based on population thresholds. Populations less than 2,500 were initially labeled “rural,” populations greater than 7,000 were initially labeled “non-rural,” and populations 2,500 to 7,000 were not classified. The population thresholds are similar to initial presumption standards in federal subsistence regulations (50 CFR 100.____ and 36 CFR 242.____). Runs conducted with initial groups based on population thresholds are summarized in the Appendix as Runs 7 to 12 and Run B.

An inherent ambiguity using population thresholds is the basis for calculating a case population’s size. Should population size be based on the people within a case population’s boundaries, which are defined by the federal census? Or is it based on the population within a standard distance from a case population? This is an issue of using consistent rules for measuring population size. For our assessments, we defined a case’s population using a standard distance applied to all cases consistently. Three distances were used to define the size of case’s population (10 miles, 20 miles, and 30 miles). That is, under a 10-mile standard, a case’s threshold status is measured by counting all the people living within ten miles of the case population’s centroid. Under a 20-mile standard, it is all the people living within 20 miles of case population’s centroid. Under a 30-mile standard, it is all people living within 30 miles of a case population’s centroid. Separate runs examining outcomes under each assumption were conducted, as shown by comparing Runs 7, 8, and 9 with each other, or by comparing Runs 10, 11, and 12 with each other.

As an alternative approach for defining initial groupings, cases were assigned to initial groups based on classifications of the Federal Subsistence Board and the State Joint Board of Fisheries and Game. Case populations classed as “rural” by both boards were initially labeled “rural,” while case populations labeled as “non-rural” by both boards were initially labeled “non-rural.” Case populations for which the federal and state board classifications differed were left unclassified. Runs conducted with initial groups defined by board classifications are summarized in the Appendix as Runs 1 to 6 and Run A.

Overall, the runs using population thresholds for initial groupings performed less well in separating cases into distinct groups than runs using board classifications for initial groupings. This is indicated by the squared canonical correlation. Starting with population thresholds, the discriminant functions were able to discriminant about 75% to 79% of the variability in the dependents (cases) (canonical correlations of 0.863 to

0.888). By comparison, runs using board classifications as starting points were able to discriminant about 81%-82% of the variability in the dependents (cases) (canonical correlations of 0.902 to 0.907). A good comparison is Run A (82.3%, 0.907) and Run B (78.1%, 0.884), both using equivalent conditions except for initial groupings.

Overall, the initial groupings also affected the classification of a few mid-sized cases (Kodiak City, Petersburg, Sitka, Unalaska, and Valdez). The initial presumption that cases above 7,000 people are “non-rural” appears to lead the discriminant function to classify mid-sized populations into the “non-rural” cluster, while an initial presumption that places like Kodiak City and Sitka are “rural” leads to a different outcome. Such mid-sized places appear to be relatively unique communities that differ from the main two clusters of cases. The presumption that a 7,000 cut-point has some significance is sufficient to push the classification of these mid-sized places into the “non-rural” group.

The initial groupings also appear to affect the classification of Saxman, a co-resident community. For example, comparing Runs A and B, Saxman is “non-rural” in Run B but “rural” in Run A. A second co-resident community (Sitka Tribe) is classified as “rural” in both Runs A and B.

Measurement of Density

Runs were conducted to examine the potential effects of measuring density by standard distances of 10 miles, 20 miles, or 30 miles from the origin population. A comparison of Runs 1, 2, and 3, or a comparison of Runs 4, 5, and 6, allows for an isolation of this factor. Such comparisons show that the classification of cases appears unaffected by the choice of distances. This suggests that there is substantial stability in the density measure across these variant distances. As long as a consistent distance is applied across all cases, the choice of 10 miles, 20 miles, or 30 miles is irrelevant for most outcomes. The 30-mile distance was chosen because the squared canonical correlation was higher for that distance than the others. A more detailed discussion of the density measure will be provided in the final report.

Source of Harvest Data

One problematic issue is how to estimate *country food production* for case populations with dual (duplicate) harvest estimates from the Community Profile Database and Harvest Ticket/Permit Records. For a few case populations, estimates are available from both sources. Dual estimates are available for certain cases in the Kenai Peninsula Borough and the Matanuska-Susitna Borough. In most instances, the estimated harvests from the CPDB are higher than the estimated harvests from the Harvest Ticket/Permit Records. The discrepancies may be due to different sampling biases connected to low sampling fractions and high non-response rates within certain surveyed populations. Our runs assessed the potential differences in outcomes associated with the harvest measure used in the analysis.

An assessment of effects of the *source of harvest estimates* can be made by comparing Run 1 with Run 4, Run 2 with Run 5, and Run 3 with Run 6 (these are runs with equivalent conditions except for source of harvest estimates). Overall, it appears that a

few cases with dual data sources change classification depending upon the data source used (Talkeetna, Fritz Creek, Hope, Nikolaevsk). The choice of data has no apparent affect on the canonical correlations of the outcomes. To deal with these difficulties, in the “best run” (Run A), a decision was made to average harvest estimates for the few cases where dual estimates were available, as described in the main report. Under this assumption, Run A classified Talkeetna and Fritz Creek “non-rural” and Hope and Nikolaevsk “rural.” However, as discussed in the main report, these were “tentative” classifications because of their distances from the group centroid (except for Hope). Tentative classifications would be subjected to additional assessments with ancillary criteria.

Appendix B Table (p.1) Summary of Discriminant Analysis Runs A and 1 - 6

INITIAL GROUPINGS HARVEST DATA FOR DUPLICATES DENSITY USED AGGREGATE USED RUN ANALYSIS ID	Initial Groups: Federal and State Subsistence Findings						
	Means	CPDB Harvests for Duplicates			Tickets/Permits for Duplicates		
	Dens30	Dens30	Dens20	Dens10	Dens30	Dens20	Dens10
	**	**	**	**	**	**	**
	A	1	2	3	4	5	6
Canonical Correlation	0.907	0.905	0.904	0.902	0.906	0.905	0.903
Canonical Correlation (Sq)	82.3%	81.9%	81.7%	81.4%	82.1%	81.9%	81.5%
V1 Coefficient	-0.812	-0.833	-0.763	-0.689	-0.805	-0.738	-0.672
V2 Coefficient	2.828	2.765	2.847	2.935	2.809	2.888	2.972
Constant	-4.882	-4.718	-4.756	-4.696	-4.839	-4.875	-4.800
G1 Centroid	-3.352	-3.314	-3.282	-3.244	-3.332	-3.301	-3.271
G2 Centroid	1.371	1.356	1.342	1.327	1.363	1.351	1.338
Classification Rate	98.4%	98.4%	98.4%	98.4%	97.8%	97.8%	98.4%
1 Lake Otis	U	U	U	U	U	U	U
2 Russian Jack	U	U	U	U	U	U	U
3 Midtown	U	U	U	U	U	U	U
4 University	U	U	U	U	U	U	U
5 Merrill Field	U	U	U	U	U	U	U
6 Northfork	U	U	U	U	U	U	U
7 MidFork-RusJack	U	U	U	U	U	U	U
8 Delaney Lake	U	U	U	U	U	U	U
9 Campbell Creek	U	U	U	U	U	U	U
10 Little Campbell Creek	U	U	U	U	U	U	U
11 Spenard	U	U	U	U	U	U	U
12 Downtown	U	U	U	U	U	U	U
13 Muldoon	U	U	U	U	U	U	U
14 Avenue Fifteen	U	U	U	U	U	U	U
15 Ship Creek	U	U	U	U	U	U	U
16 Airport	U	U	U	U	U	U	U
17 OMalley	U	U	U	U	U	U	U
18 Lower OMalley-Cambell Lk	U	U	U	U	U	U	U
19 Coastal Refuge	U	U	U	U	U	U	U
20 Rabbit Creek	U	U	U	U	U	U	U
21 Elmendorf	U	U	U	U	U	U	U
22 Fort Richardson	U	U	U	U	U	U	U
23 Upper OMalley	U	U	U	U	U	U	U
24 Eagle River	U	U	U	U	U	U	U
25 Chugiak	U	U	U	U	U	U	U
26 Eklutna	U	U	U	U	U	U	U
27 Girdwood	U	U	U	U	U	U	U
28 Central Fairbanks	U	U	U	U	U	U	U
29 Southwest Fairbanks	U	U	U	U	U	U	U
30 North Pole Area	U	U	U	U	U	U	U
31 Fort Wainwright	U	U	U	U	U	U	U
32 Northwest Fairbanks	U	U	U	U	U	U	U
33 Northeast Fairbanks	U	U	U	U	U	U	U
34 Eielson AFB	U	U	U	U	U	U	U
35 North Fairbanks	U	U	U	U	U	U	U
36 Salcha-Harding	U	U	U	U	U	U	U
37 Juneau City and Borough	U	U	U	U	U	U	U
38 Big Lake	U	U	U	U	U	U	U
39 Glacier View CDP	U	U	U	U	U	U	U
40 Houston	U	U	U	U	U	U	U
41 Palmer (group)	U	U	U	U	U	U	U
44 Skwentna (group)	R	R	R	R	R	R	R
45 Sutton-Alpine	U	U	U	U	U	U	U
46, 47 Talkeetna	U	U	U	U	R	U	U
48 Trapper Creek	U	R	R	R	U	U	U
49 Wasilla (group)	U	U	U	U	U	U	U
50 Willow (group)	U	U	U	U	U	U	U
51 Anchor Point (group)	U	U	U	U	U	U	U
52 Clam Gulch	R	R	R	R	R	R	R
53 Cooper Landing	R	R	R	R	R	R	R

Appendix B Table (p.2). Summary of Discriminant Analysis Runs A and 1 - 6

INITIAL GROUPINGS HARVEST DATA FOR DUPLICATES DENSITY USED AGGREGATE USED RUN ANALYSIS ID	Initial Groups: Federal and State Subsistence Findings						
	Means	CPDB Harvests for Duplicates			Tickets/Permits for Duplicates		
	Dens30	Dens30	Dens20	Dens10	Dens30	Dens20	Dens10
	**	**	**	**	**	**	**
	A	1	2	3	4	5	6
54 Fritz Creek CDP	U	R	R	R	U	U	U
56, 57 Homer	U	U	U	U	U	U	U
58, 59 Hope	R	R	R	R	U	U	U
60 Kasilof (group)	U	U	U	U	U	U	U
61, 62 Kenai	U	U	U	U	U	U	U
64 Moose Pass (group)	U	U	U	U	U	U	U
65 Nikiski	U	U	U	U	U	U	U
66 Nikolaevsk	R	R	R	R	U	U	U
67 Ninilchik	R	R	R	R	R	R	R
68 North Fork Road	U	R	R	R			
69, 70 Seldovia	R	R	R	R	U	U	R
71 Seward (group)	U	U	U	U	U	U	U
72 Soldotna (group)	U	U	U	U	U	U	U
73 Voznesenka	R	R	R	R			
74 Whittier	R	R	R	R	R	R	R
75 Valdez	R	R	R	R	R	R	R
76 Ketchikan	U	U	U	U	U	U	U
77 Saxman	R	R	R	R	R	R	R
78 Akhiok	R	R	R	R	R	R	R
80 Akutan	R	R	R	R	R	R	R
81 Alakanuk	R	R	R	R	R	R	R
82 Aleknagik	R	R	R	R	R	R	R
83 Allakaket/Alatna	R	R	R	R	R	R	R
84 Anderson	R	R	R	R	R	R	R
85 Angoon	R	R	R	R	R	R	R
86 Anvik	R	R	R	R	R	R	R
87 Atka	R	R	R	R	R	R	R
88 Barrow	R	R	R	R	R	R	R
89 Beaver	R	R	R	R	R	R	R
90 Bettles-Evansville	R	R	R	R	R	R	R
91 Brevig Mission	R	R	R	R	R	R	R
92 Cantwell	R	R	R	R	R	R	R
94 Chenega Bay	R	R	R	R	R	R	R
95 Chickaloon	R	R	R	R	R	R	R
96 Chignik Bay	R	R	R	R	R	R	R
97 Chignik Lagoon	R	R	R	R	R	R	R
98 Chignik Lake	R	R	R	R	R	R	R
99 Chistochina	R	R	R	R	R	R	R
100 Chitina	R	R	R	R	R	R	R
101 Clark's Point	R	R	R	R	R	R	R
102 Coffman Cove	R	R	R	R	R	R	R
103 Copper Center	R	R	R	R	R	R	R
104 Cordova	R	R	R	R	R	R	R
105 Craig	R	R	R	R	R	R	R
106 Deering	R	R	R	R	R	R	R
107 Dillingham	R	R	R	R	R	R	R
110 Egegik	R	R	R	R	R	R	R
111 Ekwok	R	R	R	R	R	R	R
113 Emmonak	R	R	R	R	R	R	R
114 False Pass	R	R	R	R	R	R	R

Appendix B Table (p.3). Summary of Discriminant Analysis Runs A and 1 - 6

INITIAL GROUPINGS HARVEST DATA FOR DUPLICATES DENSITY USED AGGREGATE USED RUN ANALYSIS ID	Initial Groups: Federal and State Subsistence Findings						
	Means	CPDB Harvests for Duplicates			Tickets/Permits for Duplicates		
	Dens30	Dens30	Dens20	Dens10	Dens30	Dens20	Dens10
	**	**	**	**	**	**	**
	A	1	2	3	4	5	6
115 Fort Yukon	R	R	R	R	R	R	R
116 Gakona	R	R	R	R	R	R	R
117 Galena	R	R	R	R	R	R	R
119 Glennallen	R	R	R	R	R	R	R
120 Golovin	R	R	R	R	R	R	R
121 Grayling	R	R	R	R	R	R	R
122 Gulkana	R	R	R	R	R	R	R
123 Gustavus	R	R	R	R	R	R	R
124 Haines	R	R	R	R	R	R	R
125 Healy	R	R	R	R	R	R	R
126 Hollis	R	R	R	R	R	R	R
127 Holy Cross	R	R	R	R	R	R	R
128 Hoonah	R	R	R	R	R	R	R
129 Hughes	R	R	R	R	R	R	R
130 Huslia	R	R	R	R	R	R	R
131 Hydaburg	R	R	R	R	R	R	R
132 Hyder	R	R	R	R	R	R	R
133 Igiugig	R	R	R	R	R	R	R
134 Iliamna	R	R	R	R	R	R	R
136 Kake	R	R	R	R	R	R	R
137 Kaktovik	R	R	R	R	R	R	R
140 Kenny Lake	R	R	R	R	R	R	R
141 King Cove	R	R	R	R	R	R	R
142 King Salmon	R	R	R	R	R	R	R
143 Kivalina	R	R	R	R	R	R	R
144 Klawock	R	R	R	R	R	R	R
145 Klukwan	R	R	R	R	R	R	R
146 Kodiak	R	R	R	R	R	R	R
147 Kodiak Road	R	R	R	R	R	R	R
149 Koliganek	R	R	R	R	R	R	R
150 Kotlik	R	R	R	R	R	R	R
151 Kotzebue	R	R	R	R	R	R	R
152 Kwethluk	R	R	R	R	R	R	R
153 Lake Louise	R	R	R	R	R	R	R
154 Larsen Bay	R	R	R	R	R	R	R
155 Levelock	R	R	R	R	R	R	R
156 Manokotak	R	R	R	R	R	R	R
158 McGrath	R	R	R	R	R	R	R
159 McKinley Park Village	R	R	R	R	R	R	R
160 Mentasta Lake	R	R	R	R	R	R	R
162 Minto	R	R	R	R	R	R	R
163 Mountain Village	R	R	R	R	R	R	R
164 Naknek	R	R	R	R	R	R	R
165 Nanwalek	R	R	R	R	R	R	R
166 Naukat Bay	R	R	R	R	R	R	R
167 Nelson Lagoon	R	R	R	R	R	R	R
168 New Stuyahok	R	R	R	R	R	R	R
169 Newhalen	R	R	R	R	R	R	R
170 Nikolai	R	R	R	R	R	R	R
172 Noatak	R	R	R	R	R	R	R

Appendix B Table (p.4). Summary of Discriminant Analysis Runs A and 1 - 6

INITIAL GROUPINGS	Initial Groups: Federal and State Subsistence Findings						
HARVEST DATA FOR DUPLICATES	Means	CPDB Harvests for Duplicates			Tickets/Permits for Duplicates		
DENSITY USED	Dens30	Dens30	Dens20	Dens10	Dens30	Dens20	Dens10
AGGREGATE USED	**	**	**	**	**	**	**
RUN ANALYSIS ID	A	1	2	3	4	5	6
174 Northway	R	R	R	R	R	R	R
175 Nuiqsut	R	R	R	R	R	R	R
176 Nunapitchuk	R	R	R	R	R	R	R
177 Old Harbor	R	R	R	R	R	R	R
178 Ouzinkie	R	R	R	R	R	R	R
180 Pedro Bay	R	R	R	R	R	R	R
181 Pelican	R	R	R	R	R	R	R
182 Perryville	R	R	R	R	R	R	R
183 Petersburg	R	R	R	R	R	R	R
184 Pilot Point	R	R	R	R	R	R	R
186 Point Lay	R	R	R	R	R	R	R
187 Port Alexander	R	R	R	R	R	R	R
188 Port Alsworth	R	R	R	R	R	R	R
189 Port Graham	R	R	R	R	R	R	R
190 Port Heiden	R	R	R	R	R	R	R
191 Port Lions	R	R	R	R	R	R	R
192 Port Protection	R	R	R	R	R	R	R
193 Quinhagak	R	R	R	R	R	R	R
194 Saint Paul	R	R	R	R	R	R	R
195 Sand Point	R	R	R	R	R	R	R
196 Shageluk	R	R	R	R	R	R	R
198 Shishmaref	R	R	R	R	R	R	R
199 Sitka	R	R	R	R	R	R	R
200 Sitka Tribe	R	R	R	R	R	R	R
201 Slana	R	R	R	R	R	R	R
202 South Naknek	R	R	R	R	R	R	R
203 Stebbins	R	R	R	R	R	R	R
204 Stevens Village	R	R	R	R	R	R	R
205 Tanacross	R	R	R	R	R	R	R
206 Tanana	R	R	R	R	R	R	R
207 Tatitlek	R	R	R	R	R	R	R
208 Tazlina	R	R	R	R	R	R	R
209 Tenakee Springs	R	R	R	R	R	R	R
210 Tetlin	R	R	R	R	R	R	R
211 Thorne Bay	R	R	R	R	R	R	R
212 Tok	R	R	R	R	R	R	R
213 Tonsina	R	R	R	R	R	R	R
215 Tyonek	R	R	R	R	R	R	R
217 Unalaska	R	R	R	R	R	R	R
218 Wainwright	R	R	R	R	R	R	R
219 Wales	R	R	R	R	R	R	R
220 Whale Pass	R	R	R	R	R	R	R
221 Whitestone Logging Camp	R	R	R	R	R	R	R
222 Wrangell	R	R	R	R	R	R	R
223 Yakutat	R	R	R	R	R	R	R

Appendix B Table (p.5) Summary of Discriminant Analysis Runs B and 7 - 12

INITIAL GROUPINGS HARVEST DATA FOR DUPLICATES DENSITY USED AGGREGATE USED RUN ANALYSIS ID	Initial Groups: <2,500; 2,500-7000; >7,000						
	Means	CPDB Harvests for Duplicates			Tickets/Permits for Duplicates		
	Dens30	Dens30	Dens30	Dens30	Dens30	Dens30	Dens30
	30-Miles	30-Miles	20-Miles	10-Miles	30-Miles	20-Miles	10-Miles
	B	7	8	9	10	11	12
Canonical Correlation	0.884	0.863	0.883	0.884	0.876	0.888	0.885
Canonical Correlation (Sq)	78.1%	74.5%	78.0%	78.1%	76.7%	78.9%	78.3%
V1 Coefficient	1.464	1.413	1.485	1.691	1.391	1.507	1.771
V2 Coefficient	-1.356	-1.152	-1.293	-1.000	-1.329	-1.332	-0.852
Constant	0.665	0.286	0.505	-0.406	0.684	0.543	-0.851
G1 Centroid	2.699	2.281	2.672	3.193	2.463	2.778	3.226
G2 Centroid	-1.316	-1.269	1.303	-1.112	-1.328	-1.332	-1.107
Classification Rate	97.2%	95.0%	96.7%	96.7%	96.0%	97.8%	97.2%
1 Lake Otis	U	U	U	U	U	U	U
2 Russian Jack	U	U	U	U	U	U	U
3 Midtown	U	U	U	U	U	U	U
4 University	U	U	U	U	U	U	U
5 Merrill Field	U	U	U	U	U	U	U
6 Northfork	U	U	U	U	U	U	U
7 MidFork-RusJack	U	U	U	U	U	U	U
8 Delaney Lake	U	U	U	U	U	U	U
9 Campbell Creek	U	U	U	U	U	U	U
10 Little Campbell Creek	U	U	U	U	U	U	U
11 Spenard	U	U	U	U	U	U	U
12 Downtown	U	U	U	U	U	U	U
13 Muldoon	U	U	U	U	U	U	U
14 Avenue Fifteen	U	U	U	U	U	U	U
15 Ship Creek	U	U	U	U	U	U	U
16 Airport	U	U	U	U	U	U	U
17 OMalley	U	U	U	U	U	U	U
18 Lower OMalley-Cambell Lk	U	U	U	U	U	U	U
19 Coastal Refuge	U	U	U	U	U	U	U
20 Rabbit Creek	U	U	U	U	U	U	U
21 Elmendorf	U	U	U	U	U	U	U
22 Fort Richardson	U	U	U	U	U	U	U
23 Upper OMalley	U	U	U	U	U	U	U
24 Eagle River	U	U	U	U	U	U	U
25 Chugiak	U	U	U	U	U	U	U
26 Eklutna	U	U	U	U	U	U	U
27 Girdwood	U	U	U	U	U	U	U
28 Central Fairbanks	U	U	U	U	U	U	U
29 Southwest Fairbanks	U	U	U	U	U	U	U
30 North Pole Area	U	U	U	U	U	U	U
31 Fort Wainwright	U	U	U	U	U	U	U
32 Northwest Fairbanks	U	U	U	U	U	U	U
33 Northeast Fairbanks	U	U	U	U	U	U	U
34 Eielson AFB	U	U	U	U	U	U	U
35 North Fairbanks	U	U	U	U	U	U	U
36 Salcha-Harding	U	U	U	U	U	U	R
37 Juneau City and Borough	U	U	U	U	U	U	U
38 Big Lake	U	U	U	U	U	U	U
39 Glacier View CDP	R	R	R	R	R	R	R
40 Houston	U	U	U	U	U	U	U
41 Palmer (group)	U	U	U	U	U	U	U
44 Skwentna (group)	R	R	R	R	R	R	R
45 Sutton-Alpine	U	U	U	U	U	U	U
46, 47 Talkeetna	R	R	R	R	R	R	R
48 Trapper Creek	R	R	R	R	R	R	R
49 Wasilla (group)	U	U	U	U	U	U	U
50 Willow (group)	U	U	U	U	U	U	U
51 Anchor Point (group)	U	U	U	R	U	U	R
52 Clam Gulch	R	R	R	R	R	R	R
53 Cooper Landing	R	R	R	R	R	R	R

Appendix B Table (p.6) Summary of Discriminant Analysis Runs B and 7 - 12

INITIAL GROUPINGS HARVEST DATA FOR DUPLICATES DENSITY USED AGGREGATE USED RUN ANALYSIS ID	Initial Groups: <2,500; 2,500-7000; >7,000						
	Means	CPDB Harvests for Duplicates			Tickets/Permits for Duplicates		
	Dens30	Dens30	Dens30	Dens30	Dens30	Dens30	Dens30
	30-Miles	30-Miles	20-Miles	10-Miles	30-Miles	20-Miles	10-Miles
	B	7	8	9	10	11	12
54 Fritz Creek CDP	U	U	U	R	U	U	U
56, 57 Homer	U	U	U	U	U	U	U
58, 59 Hope	R	R	R	R	R	R	R
60 Kasilof (group)	U	U	U	U	U	U	U
61, 62 Kenai	U	U	U	U	U	U	U
64 Moose Pass (group)	R	R	R	R	R	R	R
65 Nikiski	U	U	U	U	U	U	U
66 Nikolaevsk	R	R	R	R	U	U	R
67 Ninilchik	R	R	R	R	R	R	R
68 North Fork Road	U	R	R	R			
69, 70 Seldovia	R	R	R	R	R	R	R
71 Seward (group)	U	U	U	U	U	U	U
72 Soldotna (group)	U	U	U	U	U	U	U
73 Voznesenka	R	R	R	R			
74 Whittier	R	R	R	R	R	R	R
75 Valdez	U	U	U	U	U	U	U
76 Ketchikan	U	U	U	U	U	U	U
77 Saxman	U	U	U	R	U	U	U
78 Akhiok	R	R	R	R	R	R	R
80 Akutan	R	R	R	R	R	R	R
81 Alakanuk	R	R	R	R	R	R	R
82 Aleknagik	R	R	R	R	R	R	R
83 Allakaket/Alatna	R	R	R	R	R	R	R
84 Anderson	R	R	R	R	R	R	R
85 Angoon	R	R	R	R	R	R	R
86 Anvik	R	R	R	R	R	R	R
87 Atka	R	R	R	R	R	R	R
88 Barrow	R	U	R	R	R	R	R
89 Beaver	R	R	R	R	R	R	R
90 Bettles-Evansville	R	R	R	R	R	R	R
91 Brevig Mission	R	R	R	R	R	R	R
92 Cantwell	R	R	R	R	R	R	R
94 Chenega Bay	R	R	R	R	R	R	R
95 Chickaloon	R	R	R	R	R	R	R
96 Chignik Bay	R	R	R	R	R	R	R
97 Chignik Lagoon	R	R	R	R	R	R	R
98 Chignik Lake	R	R	R	R	R	R	R
99 Chistochina	R	R	R	R	R	R	R
100 Chitina	R	R	R	R	R	R	R
101 Clark's Point	R	R	R	R	R	R	R
102 Coffman Cove	R	R	R	R	R	R	R
103 Copper Center	R	R	R	R	R	R	R
104 Cordova	R	R	R	R	R	R	R
105 Craig	R	R	R	R	R	R	R
106 Deering	R	R	R	R	R	R	R
107 Dillingham	R	R	R	R	R	R	R
110 Egegik	R	R	R	R	R	R	R
111 Ekwok	R	R	R	R	R	R	R
113 Emmonak	R	R	R	R	R	R	R
114 False Pass	R	R	R	R	R	R	R

Appendix B Table (p.7) Summary of Discriminant Analysis Runs B and 7 - 12

INITIAL GROUPINGS HARVEST DATA FOR DUPLICATES DENSITY USED AGGREGATE USED RUN ANALYSIS ID	Initial Groups: <2,500; 2,500-7000; >7,000						
	Means	CPDB Harvests for Duplicates			Tickets/Permits for Duplicates		
	Dens30	Dens30	Dens30	Dens30	Dens30	Dens30	Dens30
	30-Miles	30-Miles	20-Miles	10-Miles	30-Miles	20-Miles	10-Miles
	B	7	8	9	10	11	12
115 Fort Yukon	R	R	R	R	R	R	R
116 Gakona	R	R	R	R	R	R	R
117 Galena	R	R	R	R	R	R	R
119 Glennallen	R	R	R	R	R	R	R
120 Golovin	R	R	R	R	R	R	R
121 Grayling	R	R	R	R	R	R	R
122 Gulkana	R	R	R	R	R	R	R
123 Gustavus	R	R	R	R	R	R	R
124 Haines	R	R	R	R	R	R	R
125 Healy	R	R	R	R	R	R	R
126 Hollis	R	R	R	R	R	R	R
127 Holy Cross	R	R	R	R	R	R	R
128 Hoonah	R	R	R	R	R	R	R
129 Hughes	R	R	R	R	R	R	R
130 Huslia	R	R	R	R	R	R	R
131 Hydaburg	R	R	R	R	R	R	R
132 Hyder	R	R	R	R	R	R	R
133 Igiugig	R	R	R	R	R	R	R
134 Iliamna	R	R	R	R	R	R	R
136 Kake	R	R	R	R	R	R	R
137 Kaktovik	R	R	R	R	R	R	R
140 Kenny Lake	R	R	R	R	R	R	R
141 King Cove	R	R	R	R	R	R	R
142 King Salmon	R	R	R	R	R	R	R
143 Kivalina	R	R	R	R	R	R	R
144 Klawock	R	R	R	R	R	R	R
145 Klukwan	R	R	R	R	R	R	R
146 Kodiak	U	U	U	U	U	U	U
147 Kodiak Road	R	U	R	R	R	R	R
149 Koliganek	R	R	R	R	R	R	R
150 Kotlik	R	R	R	R	R	R	R
151 Kotzebue	R	R	R	R	R	R	R
152 Kwethluk	R	R	R	R	R	R	R
153 Lake Louise	R	R	R	R	R	R	R
154 Larsen Bay	R	R	R	R	R	R	R
155 Levelock	R	R	R	R	R	R	R
156 Manokotak	R	R	R	R	R	R	R
158 McGrath	R	R	R	R	R	R	R
159 McKinley Park Village	R	R	R	R	R	R	R
160 Mentasta Lake	R	R	R	R	R	R	R
162 Minto	R	R	R	R	R	R	R
163 Mountain Village	R	R	R	R	R	R	R
164 Naknek	R	R	R	R	R	R	R
165 Nanwalek	R	R	R	R	R	R	R
166 Naukati Bay	R	R	R	R	R	R	R
167 Nelson Lagoon	R	R	R	R	R	R	R
168 New Stuyahok	R	R	R	R	R	R	R
169 Newhalen	R	R	R	R	R	R	R
170 Nikolai	R	R	R	R	R	R	R
172 Noatak	R	R	R	R	R	R	R

Appendix B Table (p.8) Summary of Discriminant Analysis Runs B and 7 - 12

INITIAL GROUPINGS HARVEST DATA FOR DUPLICATES DENSITY USED AGGREGATE USED RUN ANALYSIS ID	Initial Groups: <2,500; 2,500-7000; >7,000						
	Means	CPDB Harvests for Duplicates				Tickets/Permits for Duplicates	
	Dens30 30-Miles	Dens30 30-Miles	Dens30 20-Miles	Dens30 10-Miles	Dens30 30-Miles	Dens30 20-Miles	Dens30 10-Miles
	B	7	8	9	10	11	12
174 Northway	R	R	R	R	R	R	R
175 Nuiqsut	R	R	R	R	R	R	R
176 Nunapitchuk	R	R	R	R	R	R	R
177 Old Harbor	R	R	R	R	R	R	R
178 Ouzinkie	R	R	R	R	R	R	R
180 Pedro Bay	R	R	R	R	R	R	R
181 Pelican	R	R	R	R	R	R	R
182 Perryville	R	R	R	R	R	R	R
183 Petersburg	U	U	U	R	U	R	R
184 Pilot Point	R	R	R	R	R	R	R
186 Point Lay	R	R	R	R	R	R	R
187 Port Alexander	R	R	R	R	R	R	R
188 Port Alsworth	R	R	R	R	R	R	R
189 Port Graham	R	R	R	R	R	R	R
190 Port Heiden	R	R	R	R	R	R	R
191 Port Lions	R	R	R	R	R	R	R
192 Port Protection	R	R	R	R	R	R	R
193 Quinhagak	R	R	R	R	R	R	R
194 Saint Paul	R	R	R	R	R	R	R
195 Sand Point	R	R	R	R	R	R	R
196 Shageluk	R	R	R	R	R	R	R
198 Shishmaref	R	R	R	R	R	R	R
199 Sitka	U	U	U	U	U	U	U
200 Sitka Tribe	R	R	R	R	R	R	R
201 Slana	R	R	R	R	R	R	R
202 South Naknek	R	R	R	R	R	R	R
203 Stebbins	R	R	R	R	R	R	R
204 Stevens Village	R	R	R	R	R	R	R
205 Tanacross	R	R	R	R	R	R	R
206 Tanana	R	R	R	R	R	R	R
207 Tatitlek	R	R	R	R	R	R	R
208 Tazlina	R	R	R	R	R	R	R
209 Tenakee Springs	R	R	R	R	R	R	R
210 Tetlin	R	R	R	R	R	R	R
211 Thorne Bay	R	R	R	R	R	R	R
212 Tok	R	R	R	R	R	R	R
213 Tonsina	R	R	R	R	R	R	R
215 Tyonek	R	R	R	R	R	R	R
217 Unalaska	U	U	U	R	U	U	U
218 Wainwright	R	R	R	R	R	R	R
219 Wales	R	R	R	R	R	R	R
220 Whale Pass	R	R	R	R	R	R	R
221 Whitestone Logging Camp	R	R	R	R	R	R	R
222 Wrangell	R	R	R	R	R	R	R
223 Yakutat	R	R	R	R	R	R	R